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China and the Northeast Region: Agricultural Machinery

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CHINA AND THE NORTHEAST REGION: AGRICULTURAL MACHINERY

by

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Abstract

Using Chinese government statistical data, relevant laws and policy regulations, and current market projections, this report aims to help new-to-market U.S. exporters understand the development of the agricultural machinery market in China and the Northeast region, identifying both challenges and opportunities.

With a vast land area and diverse topography, China is one of the world's top agricultural producers. Agriculture accounts for about 11% of China's GDP and more than 40% of China's employment. Over the past several years, China has been increasing its agricultural mechanization in an effort to move from traditional to modern farming. The central government has been supportive of this growth through favorable policies that provide a variety of subsidies and financial aid programs, allowing small Chinese farmers to mechanize. Agricultural machinery cooperatives have also improved access to equipment for typical farmers.

In addition to mechanization, commercialization and increased use of biotechnology have already improved agricultural efficiency and yields. Many of China's core agricultural outputs also enjoy high local and global market prices. Both private and public investment in agriculture is high, and it is expected that investment will increase as producers seek to control their own supply chains. This alignment of both market demand and government support provides a window of opportunity for companies involved in the agricultural machinery industry.

China's Northeast region is one of the country's primary agricultural bases, particularly for key commodities such as soybeans, corn, wheat, rice, and other grains. One of the central government's key goals for the development of the northeast, as outlined in the 12th Five Year Plan, is to support the northeast region as a strategic base of national grain production and use the region as a food security base. Therefore, Northeast China stands out as a major market for agricultural machinery.

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Introduction

With a vast land area and diverse topography, China is one of the world's top agricultural producers. Agriculture accounts for about 11% of China's GDP and more than 40% of China's employment.[1] Over the past several years, China has been increasing its agricultural mechanization in an effort to move from traditional to modern farming. The central government has been supportive of this growth through favorable policies that provide a variety of subsidies and financial aid programs, allowing small Chinese farmers to mechanize. Agricultural machinery cooperatives have also improved access to equipment for typical farmers.[2]

In addition to mechanization, commercialization and increased use of biotechnology have already improved agricultural efficiency and yields. Many of China's core agricultural outputs also enjoy high local and global market prices. Both private and public investment in agriculture is high, and it is expected that investment will increase as producers seek to control their own supply chains.[3] This alignment of both market demand and government support provides a window of opportunity for companies involved in the agricultural machinery industry.

China's Northeast region is one of the country's primary agricultural bases, particularly for key commodities such as soybeans, corn, wheat, rice, and other grains. One of the central government's key goals for the development of the northeast, as outlined in the 12th Five Year Plan, is to support the northeast region as a strategic base of national grain production and use the region as a food security base. Challenges to mechanization still remain, however, as variations in geographic features and the differing levels of economic development from region to region make it difficult for many farmers to leave traditional farming behind.

This report aims to help new-to-market U.S. exporters understand the development of the agricultural machinery market in China and the Northeast region, identifying both challenges and opportunities.

Market Demand

Goals relating to the promotion of agricultural modernization feature prominently in China's 12th Five Year Plan. One of the major policy directions identified in the plan is to "promote agricultural modernization...improve the long-term mechanism of industry supporting agriculture...strengthen our support for agriculture, provide more benefits to farmers, promote agricultural modernization and improve farmers' living standards, all in a bid to build a better homeland for farmers."[4] Because increasing production and achieving mechanization on small plots of land is nearly impossible, the government is simultaneously focusing on concentrating land into larger farms under the management of professional cooperatives and providing subsidies for the purchase of agricultural machinery. This system makes mechanization both practical and possible.

In 2010, the demand for agricultural equipment in China reached 135 billion RMB, accounting for 18% of the world market.[5] It has been projected that this demand will continue to grow 10.8% annually, resulting in a demand of 225 billion RMB in 2015.[6] Tractors comprise the largest share of this demand, accounting for 30% of the total in 2010.[7]

In 2011, the Chinese agricultural machinery market had total revenue of $3.6 billion, demonstrating a CAGR of 16.1% between 2007 and 2011.[8] During the same period, market consumption values also increased 13.7%, reaching a total of 363,000 units in 2011.[9] It is expected that while growth will continue over the next several years, it will do so at a decelerated rate of around 13% between 2011 and 2016, resulting in a projected market value of $6.6 billion by the end of 2016.[10]

China has already reached a relatively high level of mechanization, projected to have reached 58.5% by the end of 2013.[11] In addition, the government has set a timeframe for upgrading overall mechanization to 70% by 2020. This will require year-on-year increases in agri-motive power of 24 million horsepower, an equivalent of 90 billion RMB per year of procurement on agricultural machinery.[12]

With fairly strong domestic production of equipment, China is actually an exporter of agricultural machinery. For the first time in 2012, China's agricultural machinery production output surpassed that of the US and EU, making it the world's largest agricultural machinery producer.[13] Tractor sales growth in China is therefore expected to remain fairly stable, with the greatest demand growth now occurring in other less-developed Asian markets.[14] Because of domestic production, tractor import growth is also slowing in China.[15] Nevertheless, demand for agricultural machinery in general has grown significantly, thanks to government subsidies and increasing wages for farmers, making greater mechanization achievable. The strongest mechanization growth potential exists for corn.[16]

In February 2009, the Ministry of Agriculture published a macro layout of the major agricultural production regions in China, mapping out geographical locations and development strategies for sixteen types of crops, fruits, and meat products, with goals to be accomplished by 2015. This layout will help ag machinery providers understand market demand and identify major business opportunities.

Market Data

China

Subsidies

In 2004, the government implemented a policy of subsidies for purchasing agricultural machinery. Since that time 74.47 billion RMB of the government's central budget has been used to subsidize the purchase of 22.72 million units by 2012. Local governments and farmers likewise invested 218.79 billion RMB in machinery purchases during the same time.[17] In 2010 the Chinese government invested 2.4 billion USD to subsidize farmers who purchased agricultural machinery. In 2011, this number rose to 2.7 billion USD, and in 2012 the total was 3 billion USD.[18] China's system of subsidies has proved successful, as seen through nine consecutive years of growth in both farmer income and grain output in China.[19] The machinery industry has enjoyed average annual growth of more than 20 percent.[20]

China's 12th Five Year Plan includes mention of the central government's intention to continue improvements of the agricultural subsidy system, providing direct subsidies to grain-growing farmers, implementing subsidies for the purchase of farming machinery, and improving comprehensive agricultural subsidies. The current agricultural machinery subsidy rate is about 30% of the total price.[21] In the CCP's first policy document issued in 2013, central leadership stressed its focus on rural development through accelerating the modernization of agricultural production and management organizations. The document specified that subsidies for agriculture should be oriented towards larger family farms, specialized households, and rural cooperatives, as it is these organizations that are the future of agricultural development in China.[22] For the past ten consecutive years, the No. 1 policy documents have all related to rural development and agriculture.[23]

Only agricultural machinery tested according to a system of national standards can qualify for subsidization. Every year the Ministry of Agriculture adjusts a list of machines that qualify for subsidization, based on that year's development focus.[24] Subsidies for the years ahead are focused on grain production machinery with the intention of achieving full mechanization from sowing through harvest.[25]

National Promotional Catalog for Ag Machinery

To better implement the "Law of the People's Republic of China on Promotion of Agricultural Mechanization," begun in 2004 and providing for a system of agricultural machinery subsidization, the Ministry of Agriculture, Ministry of Finance, and National Development and Reform Commission regularly issue a catalog of agricultural machines supported by the state. The most recent National Promotional Catalog for Ag Machinery was announced February 24, 2012 and spans the years 2012-2014. The catalog lists 4,118 types of products that are manufactured or assembled in China. Specific ranges of power and types of machinery must be met before companies can have their machinery listed in the catalog. Companies with machinery that meet these requirements can submit their applications to their provincial administrative departments of agricultural mechanization. If deemed by national specialists to meet national specifications, these machines are approved by the previously specified national ministries. This catalog is the reference from which companies and machinery are selected for listing on the national subsidizing list.

Sixteen major agricultural products and their regions

In early 2009, the Ministry of Agriculture (MOA) published a macro layout of sixteen types of major crops, based on regional advantages and potential. The MOA specified the present situation for each product, addressed deficiencies, and provided guidance and set goals to be accomplished by 2015 for each region. These products are rice, wheat, corn, soybeans, potatoes, cotton, rapeseed, sugar cane, apples, oranges, seafood (for export), natural rubber, beef cattle, sheep, dairy cattle, and swine. Their respective major production regions are listed at the end of this report. For most of these products, the current mechanized production and technology level is relatively low, due to a lack of high horsepower equipment, insufficient supervision and service, and an under developed financing system.

China's agricultural mechanization level

By 2011, the agricultural mechanization level in China reached 54.8%, up 20.5% since subsidies began in 2004. It is projected that by the end of 2013, this level will have reached 58.5%.[26] Since the government implemented its policy of subsidies for purchasing agricultural machinery in 2004, agricultural machinery power has increased from 604 million kw to 977 million kw in 2011. It is estimated that by the end of 2012, total power reached 1 billion kw, realizing the government's goal as expressed in the 12th Five Year Plan.[27] China seems on track to reach its goal of 70% mechanization by the year 2020.[28]

As of 2011, wheat was mechanized at more than 85%; corn at more than 75% for sowing and 25% for harvesting; and rice at 20% for sowing and 60% for harvesting.[29]

Foreign Trade

In 2011, China imported and exported 40.5 billion USD worth of agricultural machinery (including engines and parts), doubling the total of two years prior. Of this, imports represented 17.5 billion USD, and exports 22.9 billion USD, making China a net exporter of agricultural equipment.[30] The top four imported products were diesel engines/motors and parts, irrigation and drainage machinery and parts, tractors and parts, and harvesters and parts, with the largest trade deficit occurring in diesel engines/motors and parts and irrigation and drainage machinery and parts.

China exports 4.42 billion USD worth of agricultural machinery to the U.S., ranking far ahead of second place .97 billion USD to Japan and .85 billion USD to Russia. China imports the most machinery from Japan, Germany, and South Korea. The U.S. ranks fourth, exporting 2.43 billion USD worth of ag machinery to China in 2011.[31] In total, trade in agricultural machinery with the U.S. totaled 6.85 billion USD in 2011, representing about 17% of China's total trade in this sector.

In 2008, China began rebating the import tax and VAT for imported new and high-horsepower farm equipment and key parts, including high-horsepower tractor, half-feed rice combine harvester, corn combine harvester, and cotton pickers.

Northeast China

Northeast China, consisting of Heilongjiang, Jilin, and Liaoning provinces, is one of the most important agricultural regions in China. The northeast is China's main production region for rice, wheat, corn, soybeans, potatoes, apples, seafood, beef, dairy cattle, and swine. The region is home to 1/3 of the national plain areas, making large agricultural equipment use more practical as farms have large expanses of level land.[32] One of the earth's three largest black soil belts spans Heilongjiang, Jilin, and Liaoning provinces, covering more than 35 million hectares of land.[33] While all of China is experiencing strong demand for agricultural machinery, it is projected that the Northeast will see the fastest growth through 2015. While the Northeast comprises only 8% of China's total land area, it contributes almost 50 million metric tons of grain production annually, representing one third of China's total.[34]

Table 1

2011 Grain Output

Region	Grain Output (mn. ton)	% National Total
Liaoning	20.36	3.6%
Jilin	31.7	5.55%
Heilongjiang	55.7	9.75%
Northeast	107.8	18.9%
China	571.21	

In 2011, the Northeast's total agri motive power reached 88.5 million kilowatts, up 35% from four years previously and comprising 9.1% of the national total, yet still lagging significantly behind provinces such as Shandong, Henan, and Hebei. The number of large and medium sized tractors was 1.25 million units, over a quarter of the national total, but only 7.7% of the nation's combined harvesters, far fewer than Shandong, Henan, and Anhui.

Table 2

2011 Agri Power Capacity and Machinery

	Total Agri Power (mn. kw)	% National Total	Tractors (mn. units)	% National Total	Large-Medium Tractors (mn. units)	% National Total	Combined Harvester (units)	% National Total
Region								
Liaoning	24.0	2.5%	0.46	2.0%	0.17	3.9%	7,900	0.7%
Jilin	23.6	2.4%	0.99	4.4%	0.35	7.9%	21,900	2.0%
Heilongjiang	40.9	4.2%	1.42	6.3%	0.73	16.6%	56,400	5.1%
Northeast	88.5	9.1%	2.87	12.8%	1.25	28.3%	86,200	7.7%
China	977.4		22.5		4.41		1,113,700	

The mechanization level for Northeast China is quite high, especially in Heilongjiang province for land cultivation and sowing. However, the region's mechanization level for harvesting is still low, especially in Liaoning and Jilin provinces.

Table 3

2011 Cultivation

Region	Land (khm^2)	% National Total
Liaoning	3,733	3.5%
Jilin	4,523	4.2%
Heilongjiang	13,980	13.1%
Northeast	22,236	20.8%
China	106,881	

Table 4

2011 Sowing

Region	Land (khm^2)	% National Total
Liaoning	2,858	3.9%
Jilin	4,185	5.7%
Heilongjiang	13,431	18.4%
Northeast	20,474	28.1%
China	72,917	

Table 5

2011 Harvesting

Region	Land (khm^2)	% National Total
Liaoning	1,254	1.9%
Jilin	1,568	2.4%
Heilongjiang	9,581	14.5%
Northeast	12,403	18.8%
China	66,006	

Heilongjiang Province

Heilongjiang is China's largest grain producing province, providing nearly 10% of China's grain output in 2011.[35] The local livestock industry is also thriving, with a total annual meat output of 724,000 tons and milk production of about 1.4 million tons. In addition, 325,000 eggs are produced annually.[36]

The province is one of the country's leading ag mechanization provinces, ranking 2nd place at 87.82% overall mechanization of plowing, sowing, and harvesting.[37] Heilongjiang has achieved complete mechanization for soybean cultivation and harvest. Heilongjiang has 44% of China's rice transplanters, but only 7% and 5% of China's corn combines and wheat & rice combines respectively.[38] Over the next couple of years there is great market potential for large and medium sized tractors and implements in Heilongjiang, as well as combined harvesters for corn, and rice transplanters and harvesters.

A current provincial initiative in Heilongjiang aimed at agricultural modernization is particularly focused on developing the local agricultural machinery industry. The initiative includes subsidies for agricultural machinery and economic incentives for foreign and domestic agricultural machinery companies moving into Heilongjiang.[39]

Jilin Province

Jilin's strong agricultural base is one of the province's major industry sectors. Six of China's top ten grain-producing counties are located in Jilin. Jilin province sits atop the world-famous Golden Corn Belt, yet only has about 6% of China's corn combine harvesters. Another major agricultural product for Jilin is rice, but in 2011 Jilin only owned 1% of China's rice harvesters for that year. To improve this situation, Jilin Province in 2009 indicated corn harvesters and rice

transplanters and harvesters as priorities for subsidies. With the subsidies, Jilin also decided to apply more large horsepower tractors and tillage equipment and implements to subsoil more areas and enlarge farm land. Since Jilin is the home to China First Auto Works (FAW), farmers in Jilin are encouraged to buy tractors or transportation vehicles made by FAW.

In late 2011, Jilin Agricultural University announced plans to establish a national laboratory for research into wheat and corn deep-processing. In addition, a development zone has been created specifically for agricultural investment, and plans are in the works for the construction of three agricultural-product logistics parks in the province.[40]

Liaoning Province

Liaoning is a major producer of staple grains in China, such as rice and corn and has achieved a level of 67.45% mechanization in plowing, sowing, and harvesting. But similar to Jilin, the harvester units Liaoning had for rice and corn were a very small portion of China's total, at 0.4% and 2% respectively. Liaoning has less farming land than Heilongjiang and Jilin, but holds a comparative advantage in fruits, vegetables, eggs, and seafood. Dalian port hosts one of three commodity exchanges in China and is a center for agricultural trade, particularly the export of grains. The province also specializes in agricultural goods processing, representing the province's second largest value-added contributor.[41] In addition to grain, 4% of China's pork and 7% of China's poultry production occurs in Liaoning.[42] Liaoning is likely to demand high horsepower tractors (larger than 100 horsepower), forage harvesters, large no-till planters, milking machinery, husbandry machinery and aquaculture machinery, as well as farm engineering machinery and agricultural facility equipment.

Best Prospects

Although China's agricultural development has made significant progress, there are still many weak links, such as the mechanical transplanting of rice and machines used for rapeseed, potatoes, sugar cane, cotton, and peanuts. The development of mechanization in livestock, aquaculture, horticulture, agro early processing, and agricultural facilities also still lags behind demand.[43] Mechanization in the Northeast is particularly focused on wheat harvesting and grain production, as well as other field crop mechanization.[44] To realize complete mechanization including pre and post production, China is in need of high horsepower and precision machinery.[45]

High Horsepower Tractors

Tractors comprise the largest share of ag machinery demand in China, accounting for 30% of the total in 2010.[46] Both large and small tractors will continue to see growth in demand, but small tractors will comprise a larger portion of this demand, as they are more practical and affordable for farming households. In 2011, the ratio of large/medium-sized tractors to small tractors was 1:4.1.[47] Large/medium-sized tractors, especially those over 100 horsepower, are seeing rapid development thanks to the favorable agricultural machinery subsidy policy. These tractors need to maximize working efficiencies with systems like GIS or GPS and work

precisely, be environmentally friendly, and have low emissions and noise. The sales volume of these larger tractors soared 66.5% in 2012.[48]

Large High-Performance Implements

China has many diversified implements to attach to tractors, including plowing and tilling, sowing, spraying and harvesting, plant protection, and straw recycling implements. There is a serious shortage, however, of new and high-tech implements such as multi-functional tools and combines. In addition, demand for planting and fertilizing equipment will likely grow the fastest as a wider range of farming equipment is adopted with further mechanization.[49]

Combined Corn Harvesters

As China's most important grain, yet less mechanized than wheat and rice, the corn sector holds great growth potential. As of 2013, the corn sector was mechanized at only 30%, lagging significantly behind rice and wheat.[50] In 2011 and 2012, the corn harvester market experienced a boom, and the sales volume of harvesters produced by several important Chinese manufacturers increased 38.1% year-on-year.[51] In the first seven months of 2012, the sales volume of corn harvesters reached 10,910 units, a year-on-year increase of 127%.[52] Northeast China covers one of three major growing areas for corn in China and therefore holds significant market potential.

Rice Transplanters

China has great market potential for rice transplanters. The transplanter market in China is monopolized by foreign brands and has a low degree of concentration. As of 2011, three firms (Kubota, Yanji Rice Transplanter, and Shandong Fuerwo Agricultural Equipment) occupied more than 50% of the market. The walking transplanter has been most popular thus far, in 2011 comprising 66.5% of the market.[53] For large expanses of land, high-speed riding transplanters have become very popular.

Large High-Performance Special-Purpose Harvesters

In addition to rice, wheat, and corn, China grows diversified economic crops which are still primarily farmed manually. Harvesters for sugar cane, peanuts, and cotton all have great market potential in China.[54] The government has stated its objective of maintaining 85% self-sufficiency in sugar after 2015. In order to reach this goal, the government plans to increase sugar cane mechanization by introducing a machinery subsidy for sugar, and helping create cooperatives for sugar mechanization.[55] Already, some sugar mills have offered free or subsidized equipment.[56]

Special-Purpose Transportation Vehicles

New types of vehicles are needed for transporting livestock and poultry in a large, ventilated space. Design of such vehicles requires food supply capabilities and animal waste treatment. Transportation vehicles for fruits and vegetables require moisture and temperature controls. Eggs and dairy products must be transported with specific packaging technology.

High-Performance Livestock Machinery

An increase in the demand for meat due to rising incomes in China requires greater industrialization of the feed sector. Currently, the feed sector is poorly mechanized, presenting opportunities for machinery and technology in the feed industry.[57] Forage machinery is needed to handle straw, especially green straw harvesting, shredding, baling and packaging. Straw is also used as a biomass and composting substance in China. As there is a large amount of straw produced from corn, soybean, and sorghum harvesting each year, straw recycling is a promising sector. Livestock breeding machinery includes hay machinery, silage machinery, feed processing machinery, and feeding machinery. For example, TMR (total mixed ration) use requires modern equipment for dairy herd improvement and production.

Ag Product Processing Machinery

To extend the industrial chain and contribute value added, many agricultural products such as wheat, rice, corn, potatoes, oil, cotton, fruit, vegetables, feed, tobacco, tea, animal husbandry, poultry, and aquaculture products are in demand of processing machinery.

Key Suppliers

Over the past several years, international companies have tapped into China's agricultural machinery market through JVs or WFOEs and have become important players in the market. Major agricultural machinery producers in China include several foreign firms such as John Deere and Case New Holland (CNH), as well as several Chinese firms such as YTO Group Corporation, Foton Lovol International Heavy Industry, Luoyang Zhongshou Machinery Equipment, and Chery Heavy Industry.[58] John Deere alone has seven Chinese production bases, including one located in Harbin that began production in 2012, with annual production capacity to reach 20,000 sets by 2016.[59] CNH also has a subsidiary in Harbin, and specializes in producing large tractors over 140 horsepower. Currently expanding facilities to manufacture planters, balers, and combine harvesters, CNH also has a new R&D center in Harbin.[60] YTO Group is the largest tractor producer in China, followed by Foton Lovol International Heavy Industry. The latter has even won international orders from several African countries.[61] These local Chinese companies have innovated and developed new machines and components.[62]

Prospective Buyers

Although individual farmers qualify for subsidies to buy new agricultural equipment, most still cannot afford to buy large, high-tech foreign machinery. In addition, most individual's farms are so small, mechanization is impractical. Therefore, machinery cooperatives play an integral role in helping farmers utilize modern machinery and achieve mechanization. It is these cooperatives and other agricultural service organizations, with adequate funding and modern management that are the prospective buyers for international companies.

Liaoning Province alone has more than 10,000 farm cooperatives with a total of 516,000 members. These cooperatives are supported by the local government, which has input nearly 46.9 million RMB. According to the Liaoning Committee of Rural Economy, the annual per capita income of cooperative members is 20% higher than that of non-members.[63]

International Competitive Bidding (ICB) represents another potential opportunity for international companies. Companies should work with local distributors and agents to identify ICB opportunities from modern farms or agricultural demonstration bases. They either have sufficient self-financing or receive incentives or loans from governments or banks.

Market Entry Strategies

China has subsidized farmers substantially to buy new farm equipment produced or assembled by companies registered in the mainland, but imported agricultural equipment does not enjoy these subsidies. However, as imported equipment is still generally superior to domestic made machines in terms of quality, technology and operation, international companies should compete in this market with new and state-of-art technology and products.[64]

International companies that are new to the China market usually choose regional distributors first and then rely on them for promotions and to identify business opportunities or end-users. As stated in a previous section, given the comparatively higher price for imported machinery, prospective buyers are usually machinery cooperatives or ICB project owners. The distributors can work with a trading company or with customs on the importing procedures and details. International companies can also take advantage of their distributors' network to hold equipment demonstrations or conduct educational seminars to potential buyers and end-users.[65]

To compete with domestic companies who have the advantages of lower labor costs in China and government subsidies, international companies must be prepared to enter this market with fine quality machinery, good after-sales service, and professional trainings. International companies should also prepare information about their company's background and product line in Chinese. Another area that many international companies can improve on is building up inventory for equipment and parts in order to shorten the shipping cycle and provide timely after-sales service.[66]

As a longer term plan, international companies may consider joint-venturing or assembling their machinery in China, thereby qualifying for listing on the National Promotional Catalog for Ag Machinery. This qualification process, including the testing and approval process by the related offices, is estimated to take at least two years.[67]

Market Access Issues & Obstacles

U.S. companies are well positioned to help China realize its goals of agricultural modernization, contributing to a more sustainable Chinese farming sector through market participation and investment.[68] Some restrictions on foreign investment in the agricultural sector still exist and limit efficiency, innovation, and development, but most of these restrictions have little to no impact on agricultural machinery specifically.[69]

Chapter 52 of China's 12th Five Year Plan deals specifically with the role of foreign investments in the agricultural sector. China plans to "optimize the structure of foreign capital by guiding foreign investments to the sectors of modern agriculture" and to "encourage foreign capital to use different means to take part in merger and acquisitions of domestic enterprises, such as buying shares, joint ventures etc."[70]

Imported agricultural machinery should comply with China's technical standards for agricultural machinery safety, and be approved by the entry-exit inspection and quarantine institutions. Items that fall under the China Compulsory Certificate (CCC) catalog are also required to be inspected by the entry-exit inspection and quarantine institutions. Plant protection machinery is a type of agricultural machinery that is required to get CCC marks before sale or import into the China market.

On July 1, 2009, China implemented the GB 16151-2008 standard for agricultural machinery safety for tractors, trailers and combined harvesters. Tractors and combined harvesters manufactured after July 1, 2009 and not meeting the GB 16151-2008 standard or the GB 7258-2004 standard for motor vehicle operation safety will not be allowed to be registered or issued plates.

Trade Events

Beidahuang International Agriculture Machinery Exhibition of Heilongjiang
Date: September 5 - 8, 2013
Location: Harbin, Heilongjiang Province

China International Agricultural Machinery and Technology Exhibition 2014
Date: March 29 – 31, 2014
Location: Qingdao, Shandong Province

References & Key Contacts

Laws and Regulations

- People's Republic of China Agricultural Mechanization Promotion Law
- People's Republic of China Agricultural Machinery Safety Supervision and Management Regulations (Implemented November 1, 2009)

Government & Associations

- Ministry of Agriculture, Agricultural Mechanization Division www.amic.agri.gov.cn
- China Agricultural Machinery Distribution Association (CAMDA) www.camda.org.cn
- China Farm Mechanization Association (CFMA)

- China Association of Agricultural Machinery Manufacturers (CAAMM)

**Last year these organizations held the China International Agricultural Machinery Exhibition in Shenyang. The exhibition showcases new farm machinery, products, and technology and is an important event for the promotion of farm equipment production. In addition, the expo is used to publicize relevant laws, policies, and regulations.[71] The event occurs annually, and in 2012 broke records in terms of the number of exhibitors and visitors. It is the biggest farm machinery event in Asia, and in 2012 over 40 foreign businesses participated.[72]

Table 6

Ag Product	Major Production Region
Rice	Northeast region; Yangtze River Basin; Southeast Coastal areas
Wheat	Yellow River, Huai River and Haihe River Basin; Lower Reaches of Yangtze River; Southwest region; Northwest region; Northeast region
Corn/Maize	North region (spring); Yellow River, Huai River and Haihe River Basin (summer); Southwest region
Soybeans	Northeast region; Yellow River, Huai River and Haihe River Basin
Potatoes	Northeast region; North China; Northwest region; Southwest region; Southern China
Cotton	Yangtze River Basin; Yellow River Basin; Northwest
Rapeseed	Upper, Middle, and Lower Reaches of Yangtze River; North China
Sugar Cane	Mid of Guangxi Province; Southwest of Yunnan Province; West of Guangdong Province; North of Hainan Province
Apples	Bohai Bay Area; Loess Plateau
Oranges	Upper and Middle Lower Reaches of Yangtze River; South Jiangxi- South Hunan- North Guangxi; South Zhejiang- West Fujian- East Guangdong
Seafood (export)	Yellow Sea and Bohai Sea area; Southeast coastal area; Yangtze River basin
Natural Rubber	Hainan Province; Yunnan Province; Guangdong Province
Beef Cattle	Central Plain of China; Northeast region; Northwest region; Southwest region
Sheep	Central Plain of China; Mid and east region; Northwest region; Southeast region
Dairy Cattle	Beijing, Tianjin and Shanghai; Northeast- Heilongjiang, Liaoning, Inner Mongolia; North China- Hebei, Shanxi, Henan, Shandong; Northwest- Xinjiang, Shaanxi, Ningxia
Swine	Yangtze River Basin; Central Plain of China; Northeast China; Guangxi and Guangdong provinces

ENDNOTES

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Author's Biography

Kelsey White was born in Logan Utah, the youngest of five. She attended Sky View High School in Smithfield Utah as part of the class of 2009, and began her studies at Utah State University in August that same year. During her time at USU, Kelsey was heavily involved in the business school's Huntsman Scholars Program, political science honor society Pi Sigma Alpha, and served as a volunteer with Best Buddies International. She traveled extensively as an undergraduate student to study business and politics in Vietnam, South Korea, China, Switzerland, Belgium, France, and Italy. She also studied Chinese for a semester at Beijing Jiaotong University and took part in several summer seminars and institutes, both domestically and abroad. She graduated in August 2013 with a B.S. in Economics, a B.A. in International Studies, and a minor in Mandarin Chinese. Currently, Kelsey is interning with the U.S. and Foreign Commercial Service at the U.S. Consulate General in Shenyang, China. Following the conclusion of her internship, Kelsey would like to seek full-time employment in China and continue pursuing a career in Asia. When not traveling or reading up on current events and political issues, Kelsey likes to spend time outdoors, play the piano, violin, and guitar, cook Chinese food, and visit her older siblings and their families.